

# Cooling - General Selection

## Specifications

All Hammond blowers and filter fans are engineered for performance and built for reliability. This versatile line includes blowers, fan trays and filter fans.

Blowers and fans use forced convection cooling, which means ambient air flows through a filter into the enclosure to cool heated components. Both blowers and fans are sized in CFM (cubic feet per minute).

It is recommended that an exhaust filter be used in combination with the blower or filter fan to act both as an exhaust point for the hot internal air plus aid in the pressurization of the enclosure, reducing the chance of unfiltered air entering the enclosure. Whenever possible, the blower or filter fan should be located in the bottom third of the enclosure and the filtered exhaust grill placed as high as possible on the opposing side. Performance levels can be further increased by adding a second exhaust filter.

## Sizing Blowers and Fans

To determine the CFM (cubic feet per minute) required in any standard situation, use the following calculation, (non-standard situations would consist of high air density – significantly more than 0.075 lbs. per cubic foot.)

$$\text{C.F.M.} = \frac{\text{Power to be dissipated (Watts)} \times 3.17}{\text{Maximum Allowable Internal Temperature (°F)} - \text{Maximum Ambient Temperature(°F)}}$$

**Note:** The calculation above is exact, but adding an additional 25% to the CFM level is a standard safety factor. If the air density is high (significantly more than 0.075 lbs. per cubic foot), use the number calculated above in the following formula:

$$\frac{\text{CFM} \times (0.075)}{\text{Non-standard air Air Density (lbs per cubic foot)}}$$

**Note:** Ambient Temperature must be lower than maximum internal temperature for fan/blower to be effective.

## THERMOSTAT

- Designed to provide air temperature control and monitoring in cabinets
- Thermostat NO (Normally Open) for control of cooling equipment, or for switching signal transmitters in case of overheating
- Thermostatic bi-metal sensor element
- Available in Fahrenheit (Part Number **SKT011419NO**) or in Celsius (Part Number **SKT011419NO-C**)
- Compact 2.4" High x 1.3" Wide x 1.4" Deep, gray ABS flame retardant plastic (UL94VO)
- 2 pole terminal for AWG 14 wire
- Switching capacity of 15A (120VAC) or 10A (250VAC)
- Temperature range from 30-140 degrees F
- cUR & UR & CE listed



## FAN & BLOWER FILTER COAT

- Provides a filter adhesive with a grease like consistency which absorbs and traps dust particles
- 10 oz. bottle with environmentally friendly trigger spray
- Part Number **1475Q**

